## REMARKS

Claims 19-34, previously withdrawn from consideration, have been canceled from this application without prejudice because they now are the subject of a divisional application.

Claims 1, 2, 4, 6, 8-10, 13-14, 16, 18, and 35 – 38 were rejected under 35 U.S.C. 102(b) as being anticipated by Parthasarathy et al. (U.S. 6,251,815) for the reasons stated by the Examiner.

Applicants continue to disagree with the Examiner in the interpretation of the teaching of the reference; and all of applicants' previous arguments are repeated here. The kind of structure taught by the reference is of a completely different kind and is the antithesis of the kind of article and structure described and claimed by applicants.

The kind of structure and the problem attempted to be solved by Parthasarthy et al. first is presented in their column 1, lines 24-36. Their structure is a component which experiences a temperature gradient between a hot side and a cold side sufficiently significant for the component to crack and fail as a result of thermal expansion stress differences between such sides or surfaces. In their column 2, lines 5-35 under SUMMARY OF THE INVENTION, the component further is described as having a hot operating side and an opposite cool operating side with at least 2 layers, called "regions" by the reference, located and extending transversely in the component between the hot side and the cool side. No such region or layer extends completely through the hot side and the opposite cool side and the matrix therebetween. They extend as stacked layers between such sides for an undefined distance within the article or component.

In the structure of the present invention, there is no such hot operating side and no such opposite cool operating side in a "region" as defined by the article of the rejected claims and described throughout the present specification, including the present drawings. Applicants have described and claimed their kind of structure to show very

clearly that their defined plurality of discrete regions extend in a columnar-type arrangement completely through spaced apart opposed surfaces and the matrix therebetween, not as transverse stacked layers as in Parthasarathy et al. Each such region of the article of the present invention is subjected, between such opposed surfaces and the matrix therebetween, to a first temperature and stress unique to that region and different from another discrete region between and through the opposed article surfaces, and the matrix therebetween.

In the structure of the reference, there are no clearly defined "surfaces" of the plurality of layer regions between the hot side and the cool side. A selection of fibers for a region of the reference extends within such region, for example region 122 or 124 of Figure 3 and region 222, 232 or 224 of Figure 4. However, such selection and such region, extending laterally for an undefined distance within an article, in no example or implication extends completely through and between the hot operating side 116 or 216 and the cool operating side 118 or 218. That would be completely contrary to the basic teaching of the reference to provide an article structure that disrupts direct thermal stress communication between such operating sides.

The Examiner has selected the embodiment of the reference's Figure 4 as an example of the teaching of the reference. The description of that Figure 4 begins in column 3, line 62, and shows clearly that such embodiment shown generally at 210 has a hot operating side 216, a cool operating side 218 and a thickness 220 therebetween. In that embodiment for comparison with and as it relates to the present claims, the "first" and "second" opposed surfaces are 216 and 218. No other surfaces are identified. Each region 222, 232 and 224 in Figure 4 is a layer extending laterally for an unidentified distance within the article and no such region extends completely through surfaces 216 and 218 and the matrix thickness 220 therebetween.

The problems to be solved by the structure of the reference and the presently claimed structure are completely different and the resulting article structures are completely different in kind. Applicants' previous arguments have emphasized such

differences. The regions, as defined by the reference and by the present invention, although the same term is used, simply are completely of different kinds to solve different problems. For all of these and the previously presented reasons, applicants believe that the reference cannot anticipate the article structure described and claimed by applicants. It is respectfully requested that the Examiner reconsider and withdraw this rejection under 35 U.S.C. 102(b).

Claims 3, 5, 7, 11-12, 15 and 17 were rejected under 35 U.S.C. 103(a) as being unpatentable over Parathasarathy et al. (U.S. 6,251,815) for the reasons stated by the Examiner.

All of these rejected claims depend, directly or indirectly, from generic claims 1 and 13 and derived at least a part of their patentable novelty from such generic claims. Therefore, all of the arguments from the rejection above are presented here in connection with this rejection to show that these rejected claims are patentable over the teaching of the reference.

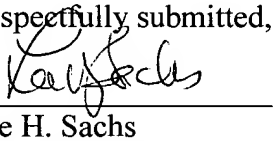
In addition, as has been discussed above, the problems proposed to be solved are of a different kind between the present invention and the reference, and the "regions" are of completely different kinds. The relative surface areas of the plurality of regions through a surface according to the present invention are significant because its plurality of regions through a surface, unlike the structure of the reference, can have different surface areas and operating temperatures, as described in the present specification. In the reference, the unidentified or not discussed area of a surface such as 116 or 118 in Figure 3, or 216 or 218 in Figure 4 is not significant. That is because such surface of a layer-type region of an article has a single surface area and is at a substantially single operating temperature, hot or cool. Therefore, the teaching of the reference cannot remotely suggest or imply the claimed relationship for a completely different kind of structure that includes different surface areas and different temperatures. In response to such conditions, the selected elastic modulii and coefficients of thermal expansion of the matrices of the columnar-type regions according to forms of the present invention differ

as a function of the different operating temperatures and required relative strengths between regions.

For all of the reasons presented in this amendment and previously, applicants believe that the claims rejected under 35 U.S.C. 103(a) are patentably novel over Parthasarathy et al. It is respectfully requested that the Examiner reconsider and withdraw this rejection.

Applicants have canceled previously withdrawn claims 19-34 without prejudice because they now are the subject of a divisional application. In addition, applicants have presented arguments showing that Parthasarathy et al. can neither anticipate nor negate the patentability of the claims remaining under consideration. It is respectfully requested that the Examiner enter this amendment, and reconsider and withdraw all rejections.

Respectfully submitted,



Lee H. Sachs
Reg. No. 18898

General Electric Co.
P.O. Box 156301 – M/D H-17
Cincinnati, Ohio 45215 – 6301
(513) 243 - 8925
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